



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,778	10/29/2001	Paul J. McClellan	10011945-1	5359

7590 05/21/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

BONZO, BRYCE P

ART UNIT PAPER NUMBER

2114

DATE MAILED: 05/21/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,778

Applicant(s)

MCCLELLAN ET AL.

Examiner

Bryce P Bonzo

Art Unit

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL OFFICIAL ACTION

Status of the Claims

Claims 1-7, 9-16, 18-25 and 27 are rejected under 35 USC §102.

Claims 8, 17 and 26 are objected while containing allowable matter.

Rejections under 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 9-16, 18-25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Mc Connell (United States Patent No. 6,216,248).

As per claims 1-7, Mc Connell discloses:

1. A computing system comprising:

data storage, the data storage including (Abstract):

a plurality of storage segments, the plurality of storage segments having different data protection levels (column 3, lines 14-17);

wherein data are stored in the plurality of storage segments based on data reliability requirements so that data with lower data reliability requirements are stored in a storage segment having a lower data protection level (column 3, lines 18-20), and data with higher data reliability requirements are stored in a storage segment having a higher data protection level (column 3, lines 21-24).

2. A computing system as in claim 1 wherein data reliability requirements for the data are determined based on resulting semantic degradation resulting from errors in the data (column 3, lines 14-24).
3. A computing system as in claim 1 wherein different data protection levels are achieved using varying percentages of redundant data being stored with the data (the first section uses some percentage of its space for ECC data, while the second portion uses none of its space for ECC data and thus they use different percentages).
4. A computing system as in claim 1 wherein different data protection levels are achieved using different types of storage media (column 2, lines 14-17, any other desired type of memory satisfies this requirement).
5. A computing system as in claim 1 wherein different data protection levels are achieved using different storage areas within a single storage medium (column 5, lines 44-49).

6. A computing system as in claim 1 wherein different data protection levels are achieved using both varying percentages of redundant data being stored with the data (see claim 3), and using different types of storage media (column 2, lines 14-17).

7. A computing system as in claim 1 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored (This is inherent but not shown, it is required for the CTR to be asserted to get back out of the memory).

9. A computing system as in claim 1 wherein for each data field to be stored, an associated field sensitivity level indicates data reliability requirements for the data field (This is implied by column 3, lines 14-24).

Claims 10-16 and 18 are the data storage embodiment with controller of claims 1-7 and 9 and are rejected accordingly.

Claims 19-25 and 26 are the methodological embodiment of claims 1-7 and 9, and are rejected accordingly.

Allowable Matter

Claims 8, 17 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

Art Unit: 2114

limitations of the base claim and any intervening claims. Applicant is reminded matter is indicated allowable as a whole, and modification to the scope of the allowable subject matter may jeopardize this indication of allowable matter.

As per claims 8, 17 and 26, the following was not found or fairly suggested in the prior art:

A computing system as in claim 1 wherein for each data field a segmentation datum is stored indicating in which data segment the data field is stored, the segmentation datum including: a storage segment index; and, a bit count.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P Bonzo whose telephone number is (703) 305-4834. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2114

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bryce P Bonzo
Examiner
Art Unit 2114
